Joseph A. Boyle

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Work Experience

Cognition IP *San Fransisco, CA*

Software Engineer *Jan 2019 - Present*

- Work with attorneys and customers to develop high-speed, efficient, and enjoyable to use workflows to automate the legal pipeline.

Rutgers University, Computer Science Department *Piscataway, NJ*

Lead Developer *July 2017 - Present*

- Lead development of a recitation management system, utilized in courses of 1000+ students this coming semester.

Rutgers University, Rutgers Learning Centers *Piscataway, NJ*

Head Learning Assistant (Introduction to Computer Science) *August 2016 - Present*

- Managed the lesson plans and weekly activities for 29 LAs while leading my own recitations.

Rutgers University, School of Arts and Science IT *Piscataway, NJ*

Programmer *September 2015 - June 2016*

- Developed a series of course searching modules and a staff directory module on Joomla!.
- Automated the transfer of data from old systems to the Joomla! CMS.

Education

Rutgers University, New Brunswick *New Brunswick, NJ*

B.S., Computer Science, Honors Program (3.6 GPA) *September 2015 - May 2019*

Academic Research

RAPIDS: Reconfigurable Approximation Application Framework *Summer 2018*

- Developed an approximation-based networking application utilizing research in the RAPIDS framework.
- Created a testing framework to evaluate energy consumption of mobile devices on various networking configurations.

Automatic Code Grading: Code Quality Analysis and Hint Generation *Summer 2018*

- Worked with a graduate student to develop new techniques in hint systems for automatically grading student code.

Visual MIMO: Calibrationless visible-light communications framework using Android phones *Spring 2016 - Spring 2017*

- Integrated algorithms for decoding color-embedded messages and general speed improvements.
- Designed and built an automated testing bench to analyze message transmission accuracy.
- Conducted an experiment on the effects on message retrieval accuracy when constraining the volume of differential metamers.
- Presented at Computer Vision and Pattern Recognition 2016 conference.

Relevant Coursework

Undergrad Computer Science	Algorithms, Computer Architecture, Compilers, Databases, Data Structures, Discrete Structures I & II, Internet Technology, Systems Programming, Principles of Programming Languages, Honors Seminar, Independent Study in Computer Vision
Grad Computer Science	Compilers I, Natural Language Processing, Brain Inspired Computing

Independent Projects

Speckle	A general usage programming language written in C that compiles to x86.
TimeTracker	A CLI program to track hours working on various tasks, written in C.
Char	An 8-bit architecture with its own instruction set, CPU design, and simulator written in C.
Indigo	An Assembly-like language with a compiler written in C, run on the Char architecture.
VoxelGen	A procedurally generated Minecraft clone written in C++, using OpenGL for graphics.
Charm	A toy functional programming language written in C.
Biometric Login	A proof-of-concept login system which utilizes how you type to authenticate you.
Chemify	An Android application which solves various chemistry problems such as predicting chemical reactions, dimensional analysis, and chemical nomenclature.
Enigma Machine	A horror game written in Java and LWJGL.

Skills

Languages	C, Java, PHP, Android, MySQL, C++, Scheme, MATLAB, Javascript, Python
Software	Linux, Git, OpenGL